

Notice of Allowability

Application No.

10/036,740

Examiner

Jeremy R. Pierce

Applicant(s)

KIM ET AL.

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's amendment filed on July 27, 2005.
2. ☒ The allowed claim(s) is/are 2-10, 17, 18 and 20-23.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

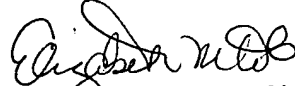
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


ELIZABETH M. COLE
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Linda Ji on October 7, 2005.

The application has been amended as follows:

Please amend the Specification at page 1, lines 6-10 as follows:

This application is a continuation-in-part of U.S. Patent Application Serial No. 09/610,748, filed July 6, 2000, now U.S. Patent No. 6,962,739, the priority of which is claimed, and the content of which is incorporated herein by reference in its entirety.

Please amend the Specification at page 6, lines 1-22 as follows:

Figs. 1 and 2 illustrate a portion of an exemplary embodiment of a fabric 10 of the present invention. Generally, the fabric 10 includes a plurality of guard plate assemblies 14 affixed to a fabric substrate 16 in a spaced relationship to each other. Referring specifically to Fig. 2, each guard plate assembly 14 includes a first layer of material 18 affixed to the fabric substrate 16 and a second layer of material 20 joined to the first layer of material 18 on a surface 22 opposite the fabric substrate 16. A lesser extent of the height of each of the guard plates may penetrate the top surface of the fabric

substrate 16. In the embodiment illustrated, each guard plate assembly 14 has an outer circumferential shape of a hexagon, which is only exemplary in that other shapes or other combination of shapes can be used. In addition, the arrangement of the guard plates can be of a regular and repeating pattern; however, in other arrangements, a random or irregular spaced-filling arrangement such as a Penrose tile arrangement can also be utilized. Also, each guard plate assembly 14, and the layers 18 and 20 forming the guard plate assemblies 14 can be planar, but need not be.

Please amend the claims as follows:

1. Canceled
2. (previously presented) The fabric of claim 4, wherein each of the second plurality of plates completely covers the surface of the corresponding first plurality of plates.
3. (currently amended) The fabric of claim ~~4~~7, wherein in at least some of the plurality of guard plates assemblies, the second layer of material does not completely cover the surface of the corresponding first layer of material.
4. (previously presented) A flexible fabric comprising a woven fabric substrate and a plurality of guard plate assemblies affixed to a top surface of the fabric substrate in a fixed relationship to each other to maintain a selected gap size, each guard plate assembly including a first layer of material affixed to the top surface of the fabric substrate, the first layer of each guard plate assembly collectively providing a first plurality of non-overlapping, polygonal guard plates penetrating at least the top surface of the fabric substrate to affix the guard plates to the fabric substrate, and a second layer of material joined to the first layer of material on a surface opposite the fabric substrate, wherein the second layer of material collectively provides a second plurality of non-overlapping guard plates registered relative to the first plurality of plates, wherein some of the gaps

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between the guard plate assemblies include material corresponding to the second layer of material.

5. (previously presented) The fabric of claim 4 wherein some of the gaps are filled with material corresponding to the second layer of material.

6. (previously presented) The fabric of claim 4 and further comprising a second plurality of guard plate assemblies affixed to the fabric substrate, each guard plate assembly of the second plurality having an upper surface formed from a material different than the material of the second layer.

7. (previously presented) The fabric of claim 6 wherein the upper surface of each of the second plurality of guard plate assemblies is formed from the first material.

8. (previously presented) The fabric of claim 4 wherein the guard plate assemblies include a third layer of material joined to a surface of the second layer of material, the third layer of material being different than the second layer of material.

9. (previously presented) A flexible fabric comprising a woven fabric substrate and a plurality of guard plate assemblies affixed to a top surface of the fabric substrate in a fixed relationship to each other to maintain a selected gap size, each guard plate assembly including a first layer of material affixed to the top surface of the fabric substrate, the first layer of each guard plate assembly collectively providing a first plurality of non-overlapping, polygonal guard plates penetrating at least the top surface of the fabric substrate to affix the guard plates to the fabric substrate, and a second layer of material joined to the first layer of material on a surface opposite the fabric substrate, wherein the second layer of material collectively provides a second plurality of non-overlapping guard plates registered relative to the first plurality of plates, wherein the second layer of material has a surface property that has higher friction than the first material.

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10. (previously presented) The fabric of claim 17 wherein the second layer of material has a surface property that is more resistive to wear than the first layer of material.

11-16 Canceled

17. (currently amended) A fabric comprising a woven fabric substrate and a single layer of non-overlapping guard plate assemblies affixed to a top surface of the fabric substrate, wherein each guard plate assembly includes a printed polygonal shaped first layer of material directly joined to the top surface of the fabric substrate, and a second layer of material joined to the first layer of material opposite the fabric substrate, wherein the printed first layer of material is joined directly to the top surface of the fabric substrate, and wherein adjacent polygonal shaped first layers of material are separated by linear gaps each having an approximately uniform width and maintain a fixed relationship relative to one another, wherein the printable first layer of material comprises epoxy, wherein in at least some of the plurality of guard plate assemblies, the second layer of material does not completely cover the surface of the corresponding first layer of material.

18. (previously presented) The fabric of claim 4, wherein a lesser extent of height of each of the plurality of polygonal guard plates penetrate the top surface of the fabric substrate.

19. Canceled

20. (previously presented) The fabric of claim 4, wherein the plurality of polygonal guard plates define a plurality of approximately linear gaps between adjacent plates, and wherein each of the linear gaps is approximately uniform in width.

21. (currently amended) The fabric of claim 4, wherein the guard plate assemblies include a third layer of material joined to a surface of the second layer of material, the third layer of material being different than the second layer of material.

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22. (new) A fabric comprising a woven fabric substrate and a single layer of non-overlapping guard plate assemblies affixed to a top surface of the fabric substrate, wherein each guard plate assembly includes a printed polygonal shaped first layer of material directly joined to the top surface of the fabric substrate, and a second layer of material joined to the first layer of material opposite the fabric substrate, wherein the printed first layer of material is joined directly to the top surface of the fabric substrate, and wherein adjacent polygonal shaped first layers of material are separated by linear gaps each having an approximately uniform width and maintain a fixed relationship relative to one another, wherein the printable first layer of material comprises epoxy, wherein the guard plate assemblies include a third layer of material joined to a surface of the second layer of material, the third layer of material being different than the second layer of material.

23. (new) The fabric of claim 22, wherein the second layer of material has a surface property that is more resistive to wear than the first layer of material.

Allowable Subject Matter

2. Claims 2-10, 17, 18, and 20-23 are allowed.

3. The following is an examiner's statement of reasons for allowance: The embodiments presented in independent claims 4, 9, 17, and 22 are novel over the prior art. The Fortier et al. (U.S. Patent No. 4,810,559) patent does not suggest having some of the gaps containing material corresponding to the second layer of plates. Also, it does not suggest having the second layer of material have a higher friction, since the glue used to hold the second layer of material onto the fabric, as an adhesive, will likely have a higher friction. Fortier et al. also do not suggest having the second layer of

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material not completely cover the first layer of material because it can be seen in Figure 3a that the adhesive layer is in registry with the plate material. Finally, Fortier et al. do not disclose or suggest a third layer of material on top of the guard plates.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (571) 272-1479. The examiner can normally be reached on normal business hours, but works flextime hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRP
Jeremy R. Pierce
October 11, 2005

Elizabeth M. Cole
ELIZABETH M. COLE
PRIMARY EXAMINER